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मानक

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IS 580 (1973): Harness Leather [CHD 17: Leather, Tanning Materials and Allied Products]



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“Knowledge is such a treasure which cannot be stolen”

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IS : 580 - 1973
(Reaffirmed 2009)

Indian Standard
**SPECIFICATION FOR
HARNESS LEATHER**
(Second Revision)

Second Reprint FEBRUARY 1987
(Incorporating Amendment No. 1)

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AMENDMENT NO. 2 APRIL 1998
TO
IS 580 : 1973 SPECIFICATION FOR
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(*Second Revision*)

[Page 5, Table 1, Sl No. (ii) (a), (b) and (c), col 3] — Substitute '45', '50' and '55' for '35', '40' and '45' respectively.

(CHD 017)

Reprography Unit, BIS, New Delhi, India

Indian Standard

SPECIFICATION FOR HARNESS LEATHER

(Second Revision)

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Indian Standard
SPECIFICATION FOR
HARNESS LEATHER
(Second Revision)

0. FOREWORD

0.1 This Indian Standard (Second Revision) was adopted by the Indian Standards Institution on 15 January 1973, after the draft finalized by the Leather Sectional Committee had been approved by the Chemical Division Council.

0.2 This standard was originally issued in 1954 and subsequently revised in 1962. This type of leather is extensively used for waist belts and various other forms of pliable straps, rifle and revolver cases, etc. Large quantities are also required for making various types of leather goods for the military. The revised standard which adequately covered the requirements and methods of test current at that time was examined to make it upto date. A review of the limits specified for various characteristics like oils and fats content, water soluble matter and water absorption has been carried out in this second revision. An objective method of test for determination of resistance to mildew has been given.

0.3 For the purpose of deciding whether a particular requirement of this standard is complied with, the final values, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS:2-1960*. The number of significant places retained in the rounded off values should be the same as that of the specified values in this standard.

1. SCOPE

1.1 This standard prescribes the requirements and methods of sampling and test for harness leather in natural and dyed condition used for making harness and saddlery. This leather is also used for almost all purposes where a strong and pliable leather is required.

*Rules for rounding of numerical values (*revised*).

2. TERMINOLOGY

2.1 For the purpose of this standard, the definitions given in IS : 1640-1960* shall apply.

3. REQUIREMENTS

3.1 Raw Materials—The material shall be well preserved bovine hides of good substance.

3.2 Tanning—The hide shall be tanned with vegetable tanning materials with or without syntans. The leather shall be fully tanned. A sharp cut made by knife shall show uniform tannage when examined visually.

3.3 Currying—The material shall be thoroughly dressed by hand or drum stuffing with a suitable mixture of oils, fats and waxes.

3.4 Finishing—The grain shall be tight and shall be well set out to make it smooth and even and shall be free from brand marks and warble holes. The flesh side shall be clean, smooth and free from flay cuts. The material shall be tight and pliable. It shall be supplied in the form of butts, bends or half bends as required by the purchaser. The material shall be of uniform thickness.

3.5 Protection Against Mildew—The material when tested as prescribed in LB: 2 of IS : 6191-1971† shall not show any growth of mildew.

3.6 Physical Requirements — The material shall also comply with the physical requirements given in Table 1.

3.7 Chemical Requirements — The material shall comply with the chemical requirements given in Table 2.

4. PACKING

4.1 The leather shall be packed as agreed to between the purchaser and the supplier.

5. MARKING

5.1 The leather pieces shall be marked with the name of the manufacturer; recognized trade-mark, if any; number of pieces of leather; and month and year of manufacture.

*Glossary of terms relating to hides, skins and leather.

†Methods of micro-biological, colour fastness and microscopical test for leather.

TABLE 1 PHYSICAL REQUIREMENTS FOR HARNESS LEATHER
(Clause 3.6)

SL No.	CHARACTERISTIC	REQUIREMENT	METHOD OF TEST (REF TO CL NO. IN IS : 5914-1970*)
(1)	(2)	(3)	(4)
i)	Apparent density, <i>Min</i>	0.9	LP : 5
ii)	Water absorption, percent, <i>Max</i> :		LP : 12†
	a) in 30 minutes	35	
	b) in 2 hours	40	
	c) in 24 hours	45	
iii)	Resistance to cracking	Shall not crack on mandrel No. 1 and shall not show any sign of permanent loosening of the grain in the form of wrinkles	LP : 13†
iv)	Tensile strength, kg/cm ² . <i>Min</i>	210	LP : 6
v)	Thickness	As agreed to between the purchaser and the supplier with a tolerance of ± 0.2 mm	LP : 2

*Methods of physical testing of leather.

†The value shall be expressed in terms of Q (see 6.1 of LP : 12 of IS : 5914-1970).

TABLE 2 CHEMICAL REQUIREMENTS FOR HARNESS LEATHER
(Clause 3.7)

SL No.	CHARACTERISTIC	REQUIREMENT	METHOD OF TEST (REF TO CL NO. IN IS : 582-1970*)
(1)	(2)	(3)	(4)
i)	Total ash, percent by mass, <i>Max</i>	2.0	LC : 3
ii)	Solvent extractable substance, percent by mass, <i>Min</i>	6.0	LC : 4
iii)	Water soluble matter, percent by mass, <i>Max</i>	15.0	LC : 6
iv)	pH of water solubles	Not below 3.5	LC : 18
v)	Differential number, <i>Max</i>	0.6	LC : 18
vi)	Degree of tannage, <i>Min</i>	50	LC : 21

NOTE — Calculation of requirements for characteristics (i) to (iii) shall be done on zero percent moisture basis.

*Methods of chemical testing of leather (first revision).

IS : 580 - 1973

5.1.1 The leather pieces may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act and the Rules and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

6. SAMPLING AND CRITERIA FOR CONFORMITY

6.1 The scale of sampling and criteria for conformity of the material to this standard shall be as prescribed in IS: 5868-1969*

*Methods of sampling for leather.



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